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MEXICAN FRESHWATER SILVERSIDES (PISCES: ATHERINIDAE) OF THE GENUS *ARCHOMENIDIA*, WITH THE DESCRIPTION OF A NEW SPECIES

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Abstract.—*Archomenidia marvelae* new species, is described from two localities in the basin of the Río Papaloapan, Oaxaca and Veracruz, Mexico. *Archomenidia marvelae* differs from *A. sallei* (the only other species in the genus) in several mensural characters, head pores and teeth on second pharyngobranchial, but most notably by its smaller eye. Distinguishing features of the genus are given, multivariate morphometrics (allometries and shape differences) of both species are compared, and descriptive data for *A. sallei* are provided.

The fish faunas of the ríos Papaloapan and Coatzacoalcos are biogeographically allied with those of Central America (Rosen 1979; Miller 1982) and have been designated as part of the large Usumacinta Fish Province (Miller 1966, 1982; Bussing 1976). Three related genera of silverside fishes—*Archomenidia, Melaniris,* and *Xenatherina*—inhabit the fresh and brackish waters of this region, sometimes sympatrically, and extend well into upland areas.

Archomenidia is confined, as far as is known, to the basins of the ríos Papaloapan and Coatzacoalcos, in Oaxaca and Veracruz, Mexico. These rivers flow into the Gulf of Mexico (Fig. 1). The genus was thought to contain two species, one restricted to each drainage, but Chernoff (1981) demonstrated that *A. bolivari* Alvarez and Carranza (1952) is conspecific with *A. sallei* (Regan, 1903).

In this paper, we describe a new species of *Archomenidia* from the Río Papaloapan drainage (Fig. 1), thus raising to two the number of species in the genus and in that basin. The new form is sympatric with *A. sallei* at both of its known localities.

Methods

Most counts and measurements are defined in Hubbs and Lagler (1964), with the following exceptions and additions. Median lateral scale rows were counted as described by Barbour (1973). Predorsal scales were enumerated along the middorsal line, including the horseshoe-shaped scale at the base of the spinous dorsal fin and the enlarged scale at the base of the occiput. Predorsal circumferential scales represent the number of scale rows around the body just anterior to the pelvic fin base. The number of transverse scale rows includes those rows between the middle of the anal fin base (excluding crowded, highly modified scales at the fin base) and the midline row between the dorsal fins, as per Miller and Carr (1974). Total gill rakers were counted on the first arch of the right side. The vertebra of origin of a median fin has been described and figured by Chernoff *et al.* (1981), and is the centrum above or below which a median fin originates. The number of anal rays anterior to the spinous or second dorsal fin includes the spine; a count of zero indicates that the spinous dorsal fin is in advance of the

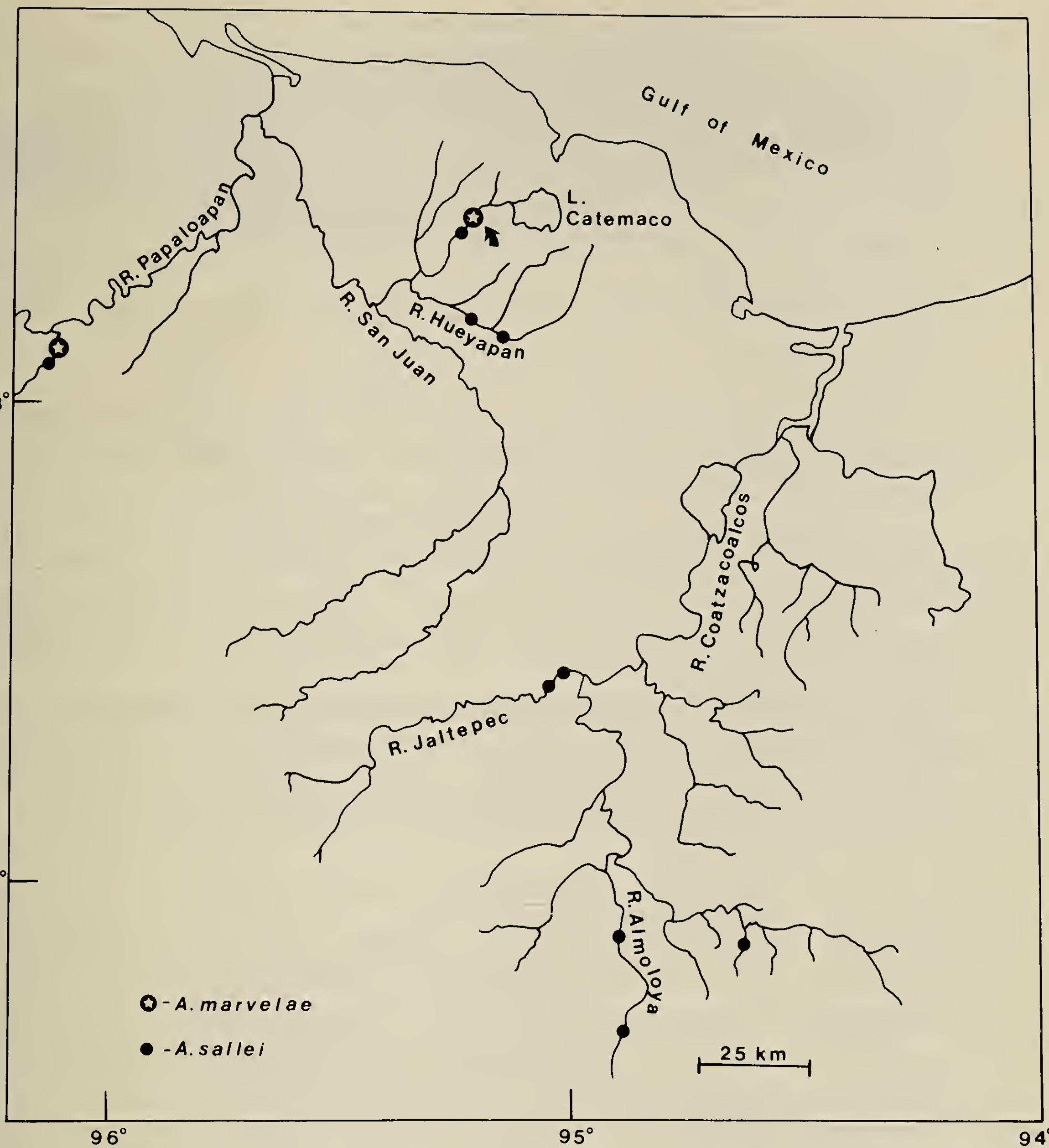

Fig. 1. Map of southern Mexico showing the sample localities for *Archomenidia marvelae* (circles with open stars) and *A. sallei* (solid circles). The type locality for *A. marvelae* is the Río Bravo just below the barrier falls, Salto de Eyipantla, and is indicated by an arrow (R. = Río, L. = Lago).

anal fin. Head depth is measured vertically over the eye. Anal fin origin to spinous or second dorsal fin origin refers to diagonal measurements between these landmarks (anal fin–D1, anal fin–D2, in tables). Postdorsal fin length is measured from the posterior margin of the second dorsal fin base to the caudal fin base.

Terminology used for the cephalic sensory canal and pore systems is modified slightly from that of Branson and Moore (1962). The supraorbital canal includes the canals and external pores associated with the frontal and nasal bones, including the pore associated with the posterior orifice of the canal (postocular sinus of Branson and Moore 1962). The temporal canal originates in the pterotic (termed postocular commissure by Branson and Moore 1962) and continues membranously until it reaches the bony canal on the posttemporal. The temporal canal communicates with the supraorbital and dermosphenotic canals anteriorly, with the preoperculomandibular canal midway, and with the supratemporal canal posteriorly. Because atherinids have an incomplete series of infraorbital bones (and associated sensory canals), it is necessary to divide the infraorbital canal into preorbital (anterior infraorbital canal) and postorbital (posterior infraorbital canal) portions. For the genus *Archomenidia,* the infraorbital bones consist of the lacrimal and jugal anteriorly, and the dermosphenotic posteriorly.

For morphometric analyses the raw data were transformed to logarithms (base 10); character designations in the morphometric section refer to logarithms of measurements. Analysis of covariance was used to test the null hypothesis that regressions calculated within species are not significantly different from each other (see Snedecor and Cochran 1980). To estimate shape differences between taxa, principal components were calculated from the covariance matrix of log-transformed variables. The result was that two distinct species clusters, or growth ovals, resided obliquely in the plane formed by the first two principal components, indicating that both components contained information about size and shape. The method of Humphries *et al.* (1981) was used to regress size from the second component, forming a size-independent shape discriminator for which loadings and scores can be calculated.

The following institutional codes are used: IPN—Instituto Politécnico Nacional, Mexico City, Mexico; TCWC—Texas Cooperative Wildlife Collection, Texas A&M University; TU—Tulane University; UMMZ—Museum of Zoology, University of Michigan; USNM—National Museum of Natural History.

Archomenidia Jordan and Hubbs, 1919

This genus is a member of the Menidiinae Schultz (1948), and may be distinguished from other genera in this subfamily by the following characters (many of which were noted by Jordan and Hubbs 1919, and Schultz 1948): precaudal vertebrae usually 22 or 23, rarely 21; two widely spaced prenarial sensory pits on top of snout; anus positioned anteriorly, between anal fin origin and pelvic fin base; upper hypural plate divided; spinous dorsal fin slightly anterior to or just posterior to origin of anal fin; anal fin sheath short, with single row of scales, restricted to anterior portion of fin; gill rakers on first arch fewer than 19; axillary scale of pelvic fin well developed; ascending process of premaxilla short and triangular; teeth in outer row of premaxilla somewhat enlarged and conical; interneural elements continuous between dorsal fins; vomer without teeth; coronoid process of dentary distinctly elevated; peritoneum dark; and mesovarium very darkly pigmented, appearing black in preserved specimens. The type-species is *Atherinichthys sallei* Regan.

Archomenidia marvelae, new species
Figure 2

Holotype.—UMMZ 209012 (formerly TCWC 1848.5), adult female, 80.2 mm SL, Mexico, Veracruz, Río Bravo just below barrier falls, Salto de Eyipantla; collected by Conner, Kent and Meyer, 19 July 1962.

Paratypes.—UMMZ 209013, 2 specimens, 45.8–94.7 mm SL, collected with holotype. UMMZ 179892, 41 specimens (including 5 cleared and stained), 12–

Fig. 2. *Archomenidia marvelae*, holotype, 80.2 mm SL, UMMZ 209012. Photo by E. C. Theriot.

36.2 mm SL, type locality; O. P. Johnson, J. Hamilton and D. C. Robinson, 23 June 1961. UMMZ 209850, 17 specimens, 59.1–86.2 mm SL, Mexico, Oaxaca, Río Papaloapan at Papaloapan, ca. 100 m below Hwy 145 bridge; R. R. & F. H. Miller and B. Chernoff, 25 January 1982.

Diagnosis.—A species of *Archomenidia* that differs from *A. sallei* in having a smaller eye (≤9.5 vs. ≥9.8% SL; $\bar{x}$ = 8.6 vs. 11.1% SL); a more slender body (greatest depth, $\bar{x}$ = 19.3 vs. 22.3% SL); a shorter preanal distance ($\bar{x}$ = 57.1 vs. 60.2% SL); anal fin usually originating under 18th vertebra (vs. usually 19th); a shorter diagonal distance between origins of anal and spinous dorsal fins ($\bar{x}$ = 18.9 vs. 22.0% SL); a shorter distance between origins of anal and second dorsal fins ($\bar{x}$ = 22.4 vs. 24.7% SL); shorter pelvic fins ($\bar{x}$ = 14.1 vs. 15.5% SL); stripe on ventral surface of caudal peduncle with two or three rows of large melanophores (vs. dusky stripe, large melanophores not organized into rows); relatively few teeth on dentary, in one or occasionally two rows (vs. relatively many teeth, crowded in two or three rows); teeth on second pharyngobranchial with shoulder posteriorly (vs. conical teeth, lacking shoulder); and anterior infraorbital canal with four or five pores (vs. two or three pores).

Description.—Data on body proportions appear in Table 1. Meristic values for the holotype are designated with asterisks below.

Body somewhat elongate, attaining 94.7 mm SL, and neither very deep-bodied anteriorly nor extremely compressed laterally. Head with blunt, broad, rounded snout; smooth, slightly convex interorbital region, and thickened lips. Anal and second dorsal fins strongly falcate. Pectoral fin inserted below lateral stripe, short, not reaching beyond vertical from mid-point of pelvic fins. Lower lobe of caudal fin longer and broader than upper lobe.

Scales lacking circuli or radii on exposed posterior field, with only three to four radii on anterior field, and moderately imbricate on sides of body. Posterior scale margins of adults entire to crenate on sides of body, and crenate or with one or two teeth on predorsal scales; juveniles with entire to slightly crenate scales. Scales present on base of caudal fin, extending distally along membrane between outer rays; procurrent caudal rays covered by scaly sheath, becoming thickened in adults.

First dorsal fin spines 4*(25 counts), 5(23), 6(1). Second dorsal fin rays I,8(9), I,9*(33), I,10(7). Anal fin rays I,16(1), I,17(13), I,18*(27), I,19(7), I,20(1). Anal fin elements anterior to: second dorsal fin origin 9(10), 10*(22), 11(14), 12(3); spinous dorsal fin origin 0(33), 1(2), 2*(2), 3(1). Pectoral fin rays 13*(3), 14(19), 15(25), 16(2). Lateral scale rows 37(5), 38*(8), 39(28), 40(6), 41(2). Predorsal scales 17(7),

Table 1. Morphometric data of *Archomenidia marvelae* (n = 33–49) and *A. sallei* (n = 51–77). Values are in thousandths of SL.

	A. marvelae			*A. sallei*	
	Holotype	Range	$\bar{x}$	Range	$\bar{x}$
SL, mm	80.2	24.5–94.7	47.1	26.8–75.7	51.4
D1 to snout tip	581	543–596	567	564–604	584
D2 to snout tip	718	664–718	698	689–739	716
Preanal length	588	544–597	571	574–636	602
Prepelvic length	382	379–421	399	400–438	418
Prepectoral length	231	231–261	253	253–287	270
Head length	226	226–269	250	250–290	267
Head depth	113	112–139	122	125–145	134
Eye diameter	71	71–95	86	98–132	111
Snout length	65	51–76	64	60–77	69
Interorbital width	77	73–92	81	77–95	86
Body depth	208	168–218	193	200–234	223
Body width	107	65–107	81	68–111	86
Caudal-peduncle					
Length	184	173–208	192	171–216	187
Width	47	21–51	28	27–51	37
Least depth	89	73–92	84	87–103	95
Postdorsal length	188	187–215	203	180–225	200
Anal fin–D1	209	158–216	189	198–234	220
Anal fin–D2	248	197–254	224	229–266	247
Anal fin base	258	220–268	244	224–258	240
D2 fin base	106	83–116	102	95–122	107
Pelvic fin length	146	121–157	141	143–166	155
Pectoral fin length	222	197–245	222	221–259	239

18(21), 19*(14), 20(5), 22(2). Predorsal circumferential scales 20(1), 21(8), 22*(39), 23(1). Transverse scale rows 7*(46), 8(3). Scales around caudal peduncle 12*(49). Total gill rakers 13(1), 14(6), 15(18), 16*(10), 17(4). Vertebrae: total 39(2), 40*(35), 41(2); precaudal 21(1), 22(21), 23*(9); and caudal 16(1), 17*(9), 18(26), 19(3). Vertebra of origin of: spinous dorsal fin 17(2), 18(32), 19*(6); second dorsal fin 24(5), 25*(35), 26(1); and anal fin 17*(3), 18(24), 19(11).

Cephalic sensory system: supraorbital canal with five pores; temporal canal with two pores; supratemporal canal with one pore; preoperculomandibular canal with 14 pores; anterior infraorbital canal with four or five pores; and posterior infraorbital canal with one pore.

Pigmentation.—Overall appearance of adults dusky to dark above and lighter below; smaller specimens generally lighter. Superficial melanophores peppered over top of head, not very concentrated in posterior two-thirds of head. Brain pigment heart-shaped, dark, and with moderately incised notch. Melanophores becoming larger and more concentrated over snout. Premaxilla darkly pigmented with small melanophores. Dentary, gular, and preorbital regions pigmented, with melanophores ending before anterior rim of orbit. Preopercle, subopercle, branchiostegal membranes, and remainder of intermandibular region generally immaculate. Upper half of opercle with patch of melanophores.

Dorsum dusky, with prominent pre-, inter- and postdorsal stripes. Predorsal

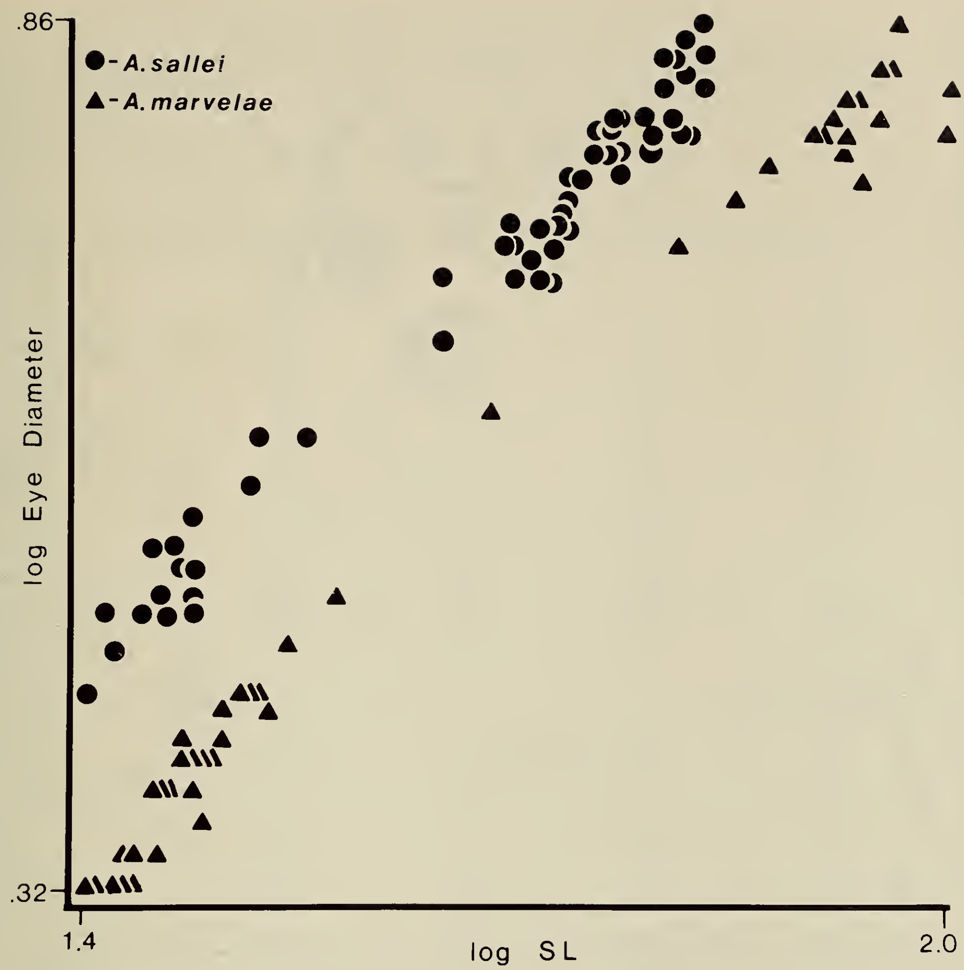

Fig. 3. Plot of log eye diameter against log SL for *Archomenidia marvelae* (n = 49) and *A. sallei* (n = 77). Each symbol represents at least one individual.

stripe with large melanophores loosely organized into three rows. Scales above lateral stripe with pigment concentrated along scale margins giving cross-hatched appearance; scales along dorsal fin bases entirely covered with melanophores. Lateral stripe uniform, its width less than height of scale, originating at pectoral insertion, expanding very little at caudal base. Pigment reduced on scales below lateral stripe; these scales faintly outlined for several rows anteriorly, grading to one row on caudal peduncle. Pigment reduced or absent on lower flanks, breast and belly. Some individuals with flecks of pigment between tips of pelvic fins and base of anal fin. Row of melanophores along base of anal fin, beginning at midpoint of fin and continuing on ventral side of caudal peduncle up to procurrent caudal rays; ventral caudal peduncle stripe with two or three pigment rows.

Melanophores present along spines of anterior dorsal fin; interradial membranes clear. Anterior lobe of second dorsal fin blackened with large flecks of pigment on rays and membranes of first five or six elements, beyond which pigment restricted to distal portion. Anal fin with prominent black anterior lobe, large melanophores on and between first six elements; remainder of fin peppered along distal margin. Outer rays of caudal fin dusky to dark; small melanophores forming black marginal band; base of caudal fin dusky, grading into lighter central region. Pectoral fin with large melanophores along upper rays and base of fin. Pelvic fins immaculate.

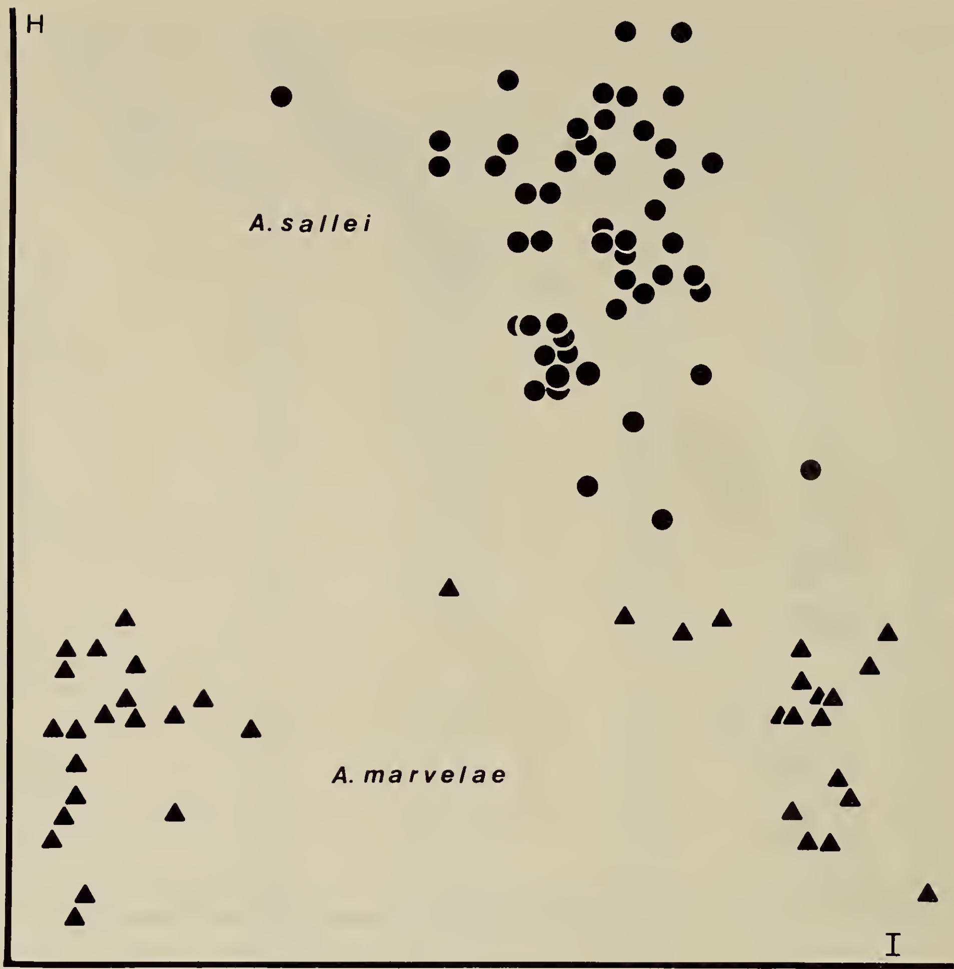

Fig. 4. Scatter diagram of scores on size-independent shape factor (H) against first principal component (I) for *Archomenidia marvelae* (n = 39) and *A. sallei* (n = 52). Each symbol represents at least one individual.

Morphometrics.—*Archomenidia marvelae* and *A. sallei* can be readily distinguished with morphometric characters; descriptive ratios are given in Table 1. The disparity between these forms results from change in proportion and allometry. Eye diameter is one of the most obvious distinguishing features (Fig. 3) and the slopes of the within-species regressions on SL are not significantly different ($P > .1$). Thus, for the range of lengths examined, eye diameter scales[1] equivalently with length, but *A. marvelae* has a smaller eye for any given SL (means and intercepts are significantly different, $P < .001$).

Overall morphometric divergence of these taxa is evident from the plot of scores on the first principal component and shape discriminator (Fig. 4); character coefficients are given in Table 2. Scores on the shape discriminator are completely nonoverlapping, and reflect the relatively smaller eye, more slender body, narrower anal fin base and longer caudal peduncle of *A. marvelae.* Scores on this factor are size-independent and even the smallest specimens included (24.5 mm SL) can be discriminated.

[1] The verb, to scale, indicates covariation of variables and does not refer to structures of dermal origin.

Table 2. Principal components analyses of *Archomenidia marvelae* (n = 39) and *A. sallei* (n = 52): A) between species analysis with coefficients for the first two principal components and the size-independent shape factor (PCI, PCII, and H,[1] respectively); B) coefficients of first principal component within each species.

	Between species			Within species	
Variables	PCI	PCII	H	*marvelae*	*sallei*
SL				.96	1.02
D1 to snout tip	.22	−.15	−.14	.98	1.07
D2 to snout tip	.22	−.15	−.14	.99	1.06
Preanal length	.23	−.07	−.07	.99	1.09
Prepelvic length	.22	−.12	−.12	.99	1.04
Prepectoral length	.22	.03	.03	.93	.97
Head length	.21	.05	.06	.90	.99
Head depth	.21	.19	.20	.89	.92
Eye diameter	.23	.57	.58	.95	.99
Snout length	.25	−.03	−.02	1.10	1.07
Interorbital width	.20	.07	.08	.88	.82
Body depth	.26	.22	.22	1.10	1.03
Caudal-peduncle					
Length	.21	−.42	−.42	.97	1.00
Least depth	.25	.15	.16	1.07	.93
Postdorsal length	.22	−.38	−.37	.97	.99
Anal fin–D1	.27	.23	.23	1.14	1.06
Anal fin–D2	.26	.04	.04	1.12	1.05
Anal fin base	.22	−.33	−.32	1.01	.95
D2 base length	.22	−.10	−.10	.97	.91
Pelvic fin length	.24	.07	.08	1.03	1.01

[1] $a = -.02$, $B_1 = 1.00$, $B_2 = -.02$.

Differences are also apparent in the relative covariances of variables with a general measure of size. Coefficients for the multivariate allometry of a taxon are calculated from the first principal component (=general size; Jolicoeur 1963) and normalizing the coefficients to a mean-square of one (i.e., by multiplying each loading by the square root of the number of variables). The standardized coefficients reflect the relative scaling of all variables with general size, and thus may be used to describe a taxon (Humphries 1981). Coefficients about 1.00 scale isometrically with size, those greater and less than 1.00 represent positive and negative allometries, respectively. Comparison of the loadings for *A. marvelae* and *A. sallei* (Table 2) indicates that the patterns of relative growth within each species are disparate. For example, head length and eye diameter are negatively allometric in *A. marvelae,* whereas these characters scale isometrically in *A. sallei.* To a degree, deviations of the coefficients between species account for the shape differences noted above. The discordance in multivariate allometries cannot be attributed to environmental effects, because two populations of *A. sallei* sympatric with *A. marvelae* are included in the analyses, and they do not differ significantly from the allopatric populations of *A. sallei.*

Two other aspects of the allometries are worthy of mention. Firstly, we noted above that eye diameter scales equivalently with SL for both taxa (Fig. 3), but the coefficients for these variables are not equivalent (Table 2). These observations are not contradictory because relative changes in both variables to size within each species are similar. That is, eye diameter and SL are negatively allometric in *A. marvelae,* and both are isometric in *A. sallei.* Secondly, the discrepancy between the relative scalings of SL with size, and the departure from isometry for SL, point to the fallacy of using any particular length as an indicator of size. Humphries *et al.* (1981) have defined general size as a factor which leaves the smallest mean squared residual when predicting all other distance measures within a population. For *A. marvelae,* SL does not predict the other variables very well, but most importantly, during growth this species increases in overall size more quickly than in SL.

Distribution.—Archomenidia marvelae is known from only two localities in the basin of the Río Papaloapan (Fig. 1). The type locality is the Río Bravo just below the barrier falls, Salto de Eyipantla. The Río Bravo drains Lake Catemaco and interestingly, no atherinids have been collected above the falls or in the lake (Miller 1975). The other locality is in the Río Papaloapan, upstream from the affluence of the Río Tonto, at the town of Papaloapan.

Habitat and Associates.—Both habitats from which *A. marvelae* has been collected have strong currents and clear water, although the Río Papaloapan may become muddied during the rainy season. At the type locality, the stream is ca. 25 m wide with coarse sand, rocks and boulders. At Papaloapan, the river is ca. 500 m wide with sand, fine mud, gravel bars and occasional large rocks.

These locations, part of the tropical lowlands of Oaxaca and Veracruz, are surrounded by perennial forest and fall within the 10°C minimum and 40°C maximum isotherms (Rzedowski 1978); the region receives between 160 and 320 cm of rainfall yearly.

Other fish species known from or near the type locality, below the falls, are: *Xiphophorus helleri, Archomenidia sallei, Cichlasoma ellioti, C. fenestratum,* and *C. octofasciatum.* The associated fish species captured with the paratypes in the Río Papaloapan are: *Dorosoma anale, Astyanax fasciatus, Cathorops aguadulce, Poecilia mexicana, P. sphenops, Strongylura hubbsi, Archomenidia sallei, Agonostomus monticola,* and *Cichlasoma ellioti.*

Etymology.—We are pleased to name this species for Marvel B. Parrington, whose dedication and hard work have contributed significantly to ichthyological efforts at The University of Michigan for the past 17 years. The name *marvelae* is a feminine noun in the genitive singular.

Archomenidia sallei (Regan)

Archomenidia sallei has remained a poorly known taxon, receiving scant systematic attention since its description by Regan (1903). Because Chernoff (1981) provided data relevant only to the status of *A. bolivari,* we present a brief description of *A. sallei* below, thus completing the meristic and morphometric data base for this genus.

Mensural data appear in Table 1, and *A. sallei* is contrasted with *A. marvelae* above. The observations below result from examination of specimens throughout the known range of the species (Fig. 1).

Archomenidia sallei is deep bodied anteriorly, laterally compressed, attaining 75 mm SL. Head deep and broad, with conspicuously large eye (see Chernoff

1981, Fig. 1) and parabola-shaped snout. Anal and second dorsal fins falcate; pectoral fin short and deep, upper rays reaching to vertical from mid-point of pelvic fins, not greatly longer than middle pectoral rays. Teeth in both jaws conical, curved and crowded into two or three irregular rows. In adults, exposed margin of scales entire to crenate (occasionally with one or two laciniations in predorsal series); posterior field of scales without circuli or radii.

First dorsal fin spines 3(1), 4(24), 5(24), 6(4). Second dorsal fin rays I,8(8), I,9(60), I,10(12). Anal fin rays I,15(1), I,16(3), I,17(17), I,18(32), I,19(22), I,20(4). Anal fin elements anterior to: second dorsal fin origin 8(2), 9(12), 10(28), 11(10); spinous dorsal fin origin 0(57), 2(1), 3(1). Pectoral fin rays 13(1), 14(22), 15(23), 16(6). Lateral scale rows 36(1), 37(15), 38(25), 39(29), 40(10). Predorsal scales 15(2), 16(2), 17(23), 18(19), 19(5), 20(1). Predorsal circumferential scales 18(1), 19(2), 20(20), 21(13), 22(33). Transverse scale rows 7(52). Scales around caudal peduncle 12(80). Total gill rakers 14(1), 15(16), 16(22), 17(12), 18(1). Vertebrae: total 39(4), 40(40), 41(3); precaudal 22(26), 23(20), 24(1); caudal 17(23), 18(23), 19(1). Vertebrae of origin of: spinous dorsal fin 17(5), 18(36), 19(15); second dorsal fin 24(11), 25(33), 26(3); anal fin 18(13), 19(30), 20(3).

Cephalic sensory system: supraorbital canal with five pores; temporal canal with one or two pores (the anterior pore on the pterotic may be absent); supraorbital canal with one pore; preoperculomandibular canal with 14 pores; anterior infraorbital canal with two or three pores; and posterior infraorbital canal with one pore.

Material Examined.—Río Papaloapan Drainage—IPN 249 (21 specimens: 13.5–32.3 mm SL), stream below Salto de Eyipantla, downstream from Comapan, Veracruz, 25 May 1951. UMMZ 92121 (18:16.8–48.7), USNM 123208 (3:36.7–45.7), Río Hueyapan, downstream from Hueyapan, ca. 9.7 km E Cuatotolapan, NW Acayucan, Veracruz, 23 July 1910. UMMZ 207708 (51:40–65), Río Hueyapan at E end of Hueyapan, 3.1 km from Highway 180, Veracruz, 24 Jan. 1979. UMMZ 209851 (3:52.1–75.7), Río Papaloapan at Papaloapan, ca. 100 m below Highway 145 bridge, Oaxaca, 25 Jan. 1982.

Río Coatzacoalcos Drainage.—TU 39125 (1:68.8), Río Jaltepec at Jesús Carranza, Veracruz, 27 Jan. 1967. UMMZ 184767 (23:47.4–63.0), Río Jaltepec, above bridge crossing on Trans-Isthmian Highway, 72.4 km S Acayucan, Veracruz, 25 Feb. 1959. USNM 162503 (20:18.4–36.8; paratypes of *A. bolivari*), Río Coatzacoalcos en el Carrizal, Santa María Chimilapa, Oaxaca, 20 May 1950. UMMZ 163238 (7:26.8–29.1; paratypes of *A. bolivari*), Río Grande or Río Almoloya, El Ocotal, Matías Romero, Oaxaca, 29 April 1950. UMMZ 178528 (12:34.6–63.7), Río Almoloya, 30.3 km N southern terminus of Highway 185, Oaxaca, 27 March 1957.

Resumen

Se describe *Archomenidia marvelae,* nueva especie de la familia Aterinidae. Su distribución se limita a aguas abajo del Salto de Eyipantla y en el Río Papaloapan, Veracruz y Oaxaca, México. La otra especie en este género, *A. sallei,* se distribuye en las cuencas de los ríos Coatzacoalcos y Papaloapan de los estados de Oaxaca y Veracruz. *Archomenidia marvelae* se distingue basicamente de *A. sallei* por un ojo más pequeño. Otros carácteres diagnósticos son: la altura del

cuerpo, la posición de las aletas anal y dorsales, la longitud de la aleta pélvica, el número de dientes mandibulares, el número de poros de línea lateral cefálica, así como la pigmentación. Estas especies tienen crecimientos alométricos muy diferentes. *Archomenidia bolivari* es considerado en sinonimia con *A. sallei.* Los carácteres en que distinguen a *Archomenidia* de otros géneros dentro de la subfamilia Menidiinae Schultz (1948) son presentados.

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